

DETAILED ACTION

Response to Amendment

Per the interview with Tim Thomas on 11/24/09, the amendment submitted after-final on 11/9/09 has been entered and considered. New grounds for rejection are presented below.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 52 and 53 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

As to claim 52, the applicant indicates that the new claim is supported by paragraphs 33 and 35 of the specification. No such support is found for the new claim limitations, i.e. that three strips are visible in a single gap at one time, and the claim therefore comprises new matter.

As to claim 53, the claim now recites that "the ratio is about 80:20 with a variance in the ratio of up to 5%." The written description does not support the recitation since it

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does not make clear that the variance of up to 5% refers to the ratio itself. The clarification on this point therefore constitutes new matter.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 28, 30-31, 33, 34, 36, 37, 39-42, 45-55 are rejected under 35

U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 28, the recited ratio of "about 80:20" (claim 28, line 11) is indefinite since the relative degree provided by the term "about" is ambiguous.

As to claim 55, the term "other viewing media" renders the claim indefinite since the scope of the claim is excessively broad and the examiner cannot determine what embodiments would be encompassed by such a recitation.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 28-31, 33-37, 42, 43, 46-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gundlach (US-5966105).

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As to claims 28, and 53, Gundlach teaches an enclosure, a frame with an interlaced image 20a, and an optical barrier comprising grills 22. Gundlach does not explicitly teach a grill to gap ratio of 80:20. Gundlach does teach that the dimensions of the grills and gaps are a matter of design choice (Gundlach, column 5, lines 54-61). The teachings of Gundlach demonstrate that the properties and design variables of an optical barrier are sufficiently understood so as to make the results of any ratio predictable to one of ordinary skill in the art. It would have been obvious to construct an optical barrier with a 80:20 grill to gap ratio since the mere optimization of dimensions is within the skill of one of ordinary skill in the art.

As to claims 30 and 31, Gundlach teaches (see figure 6) applying the image to a single piece of transparent material 23. (Gundlach, column 8, lines 10-18)

As to claims 33 and 34, Gundlach teaches grills having circular segment cross-sections with a curved face where the vertex of grills is the smallest distance between the image and the grills.

As to claims 36 and 37, the grills are arranged in a vertically oriented linear array with a gap between adjacent grills.

As to claims 39-41, the claimed dimensions would have been obvious to one of ordinary skill in the art since the mere optimization of dimensions is within the skill of one of ordinary skill in the art.

As to claim 42, the enclosure is adapted to house fluorescent lights sources (column 7, lines 15-17).

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As to claim 46 and 47, Gundlach teaches that the relative position of the image frame and optical barrier is adjustable (column 6, line 5) by adjusting the angle, or tilting, the louvres of the optical barrier.

As to claim 48, Gundlach teaches an embodiment (figure 2) where the grill is formed from louvers 44 with viewing slits 41. The slits 41 are air gaps.

As to claim 49, Gundlach teaches that the grills are optically opaque.

As to claims 50 and 51, Gundlach teaches that the enclosure should be formed from non-reflective, opaque material (Gundlach, column 8, lines 47-63).

As to claim 54, Gundlach teaches that the image may be printed on paper (column 7, lines 35-41). Paper is a flexible material and as such, one of ordinary skill in the art would recognize that the frame must hold the material taut in order to properly align the interlaced image with the optical barrier. The claim is therefore obvious.

As to claim 55, Gundlach teaches printing or projecting the image on a viewing medium.

Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gundlach (US-5966105) in view of Erbey (US-6476850). Gundlach lacks teaching that the distance between the grill and the image is adjustable. Erbey teaches a similar device where the distance between the optical barrier and the interlaced image can be adjusted to allow for a variable viewing distance. It would have been obvious to one of ordinary skill in the art to make this distance adjustable to allow greater flexibility in viewing situations.

Claims 28, 30-31, 33-34, 36-37, 39-42, 46-55 are alternatively rejected under 35 U.S.C. 103(a) as being unpatentable over Gundlach (US-5966105) in view of McKinley (US-7210257).

Gundlach lacks specific teaching that the ratio of grill to gap width should be about 80:20. McKinley teaches a viewing device (shown in figures 13-14) with an interlaced image masked by a raster pattern of opaque grills and transparent gaps. McKinley states "For the barrier strip implementation, for example, three distinct images can be reproduced using a barrier strip aspect ratio of 4:1 (that is, the width of the opaque bars is four times greater than the width of the transparent bars)." (McKinley, column 11, lines 37-54) A 4:1 ratio is equivalent to an 80/20 ratio. It would therefore be obvious to one of ordinary skill in the art to construct the device taught by Gundlach with a grill to gap ratio of 80/20, since this ratio is specifically taught in the art to be effective.

Claim 45 is alternatively rejected under 35 U.S.C. 103(a) as being unpatentable over Gundlach (US-5966105) in view of McKinley (US-7210257) and further in view of Erbey (US-6476850).

Response to Arguments

Applicant's arguments filed 11/9/09 have been fully considered but they are not persuasive.

Regarding the rejection of claim 52 under 35 U.S.C. 112 1st paragraph, the applicant asserts that the specification inherently teaches the limitation. The applicant

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has not sufficiently explained how the recited dimensions provide for the function of allowing parts of adjacent strips of interlaced images to be seen by a viewer through the gap at any time. One of ordinary skill in the art would not be able to infer the recited function from the original disclosure of such dimensions. The claim limitations therefore present new matter.

Regarding the rejection of claim 28 under 35 U.S.C. 112, 2nd paragraph, the applicant asserts that the term "about" is not *per se* indefinite and that the courts have consistently interpreted the ordinary meaning of "about" not to be indefinite. "About 80/20" is ambiguous because it is a relative term, and suggests that there is a suitable range of ratios that the term encompasses. The disclosure provides no standard by which to ascertain the suitable range and the limitation is indefinite. The case law cited by the applicant (*Ortho-McNeil Pharmaceutical, Inc. v. Caraco Pharmaceutical Labs, Ltd.*, 476 F.3d 1321) does not apply in this case because the fact pattern is not the same. In the cited case, criticality of the claimed ratio is necessary to allow consistent interpretation of the term "about". The patent specification in that case included "data points from experiments" which clearly showed a suitable range to support the finding that the recitation of "about 1:5" was clearly understood and therefore definite. As discussed in the interview on 11/24/09, criticality of the recited ratio is not supported by the present disclosure. The disclosure does not support a finding that a suitable range for "about 80/20" was clearly understood at the time of the invention and the term about therefore renders the claim indefinite.

Regarding the rejection of claim 53 under 35 U.S.C. 112, 2nd paragraph, the present amendment renders the claim definite, however the claim is now rejected under 35 U.S.C. 112, 1st paragraph as it presents new matter. The applicant submits that the specification in paragraph 0033 makes it clear that the 5% relates to the ratio itself (i.e. 4+- 5%, or 3.8-4.2). The examiner disagrees. The original disclosure does not make clear what 5% refers to. The written description does not support the claim recitation and the clarification on this point therefore constitutes new matter.

Regarding the rejection of claim 55 under 35 U.S.C. 112, 2nd paragraph, the applicant asserts that “persons skilled in the art would appreciate that a wide variety of viewing media may be used to display the image of the present invention and would not require a complete listing of such alternative viewing media to appreciate the metes and bounds of the claim.” While one skilled in the art might appreciate that a wide variety of media may be used, one skilled in the art cannot appreciate the metes and bounds of the claim because the term is too broad to define any metes or bounds.

Regarding the rejection of the claims under 35 U.S.C. 103(a) in view of Gundlach, the applicant argues that the 80/20 ratio is critical and is not an obvious design choice. As discussed in the phone interview with Tim Thomas on 11/24/09, the disclosure does not support a finding that the ratio is critical to the invention and the

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examiner must maintain that the claimed ratio is obvious as the result of design choice and optimization of dimensions.

Furthermore, a showing of criticality of the 80/20 ratio is moot in view of the new art rejection presented in view of McKinley, since McKinley specifically teaches the effectiveness of a 80:20 ratio.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRISTOPHER E. VERA who's telephone number is (571)272-2329. The examiner can normally be reached on Monday through Friday, 8:00 to 5:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lesley Morris can be reached on 571-272-6651. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/C. E. V./
Examiner, Art Unit 3611

/LESLEY D MORRIS/
Supervisory Patent Examiner, Art Unit 3611